

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listing, of claims in the application:

**Listing of Claims:**

1. (Currently Amended): A polymer electrolyte comprising:

a modified chlorine containing polymer having an enhanced chlorine level relative to a chlorine content of an unmodified chlorine containing polymer formed from polymerization of its monomer;

a salt of an alkali metal; and

an aprotic solvent[[,]] :

wherein said polymer electrolyte is a single phase material solid polymer electrolyte comprising said salt and said aprotic solvent integrated with said modified polymeric material chlorine containing polymer;

wherein said modified chlorine containing polymer comprises C-PVC, said C-PVC having 60-72 wt % chlorine;

wherein said polymer electrolyte comprises 10-40 wt % of said C-PVC.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Currently Amended): The polymer electrolyte of claim 1, wherein said alkali metal salt is ~~at least one~~ selected from the group consisting of LiClO<sub>4</sub>, LiBF<sub>4</sub>, LiAsF<sub>6</sub>, LiPF<sub>6</sub>, LiCF<sub>3</sub>SO<sub>3</sub>, [[and]] LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>, and combinations thereof.

9. (Previously Presented): The polymer electrolyte of claim 1, wherein said electrolyte comprises from 3-20 wt % of said salt of an alkali metal.

10. (Currently Amended): The polymer electrolyte of claim 1, wherein as said aprotic solvent is ~~at least one~~ selected from the group consisting of propylene carbonate, ethylene carbonate, dimethyl carbonate, gamma-butyrolactone, 1,3-dioxolane, [[and]] dimethoxyethane, and combinations thereof.

11. (Previously Presented): The polymer electrolyte of claim 1, wherein said electrolyte comprises 40-82 wt % of said aprotic solvent.

12. (Currently Amended): A rechargeable battery, comprising:  
an anode containing an alkali metal;

a cathode; and

a polymer electrolyte formed from a modified chlorine containing polymer having an enhanced chlorine level relative to a chlorine content of an unmodified chlorine containing polymer formed from polymerization of its monomer, a salt of an alkali metal[[;]], and an aprotic solvent[[,]] ;

wherein said polymer electrolyte is a single phase material solid polymer electrolyte comprising said salt and said aprotic solvent integrated with said modified polymeric material chlorine containing polymer;

wherein said modified chlorine containing polymer comprises C-PVC, said C-PVC having 60-72 wt % chlorine;

wherein said polymer electrolyte comprises 10-40 wt % of said C-PVC.

13. (Canceled)

14. (Canceled)

15. (Currently Amended): The rechargeable battery of claim 12, wherein [[in]] said anode comprises lithium.

16. (Canceled)

17. (Canceled)

18. (Previously Presented): The rechargeable battery of claim 12, wherein said anode comprises a lithium-ion intercalation material.

19. (Original): The rechargeable battery of claim 12, wherein said cathode comprises a metal oxide.

20. (Original): The rechargeable battery of claim 12, wherein said cathode comprises a lithium-transition metal oxide.

21. (Currently Amended): The rechargeable cell of claim 12, wherein said cathode is ~~at least one~~ selected from the group consisting of  $\text{MnO}_2$ ,  $\text{LiMn}_2\text{O}_4$ , [[and]] vanadium oxides ( $\text{V}_x\text{O}_y$ ), and combinations thereof.

22. (Original): The rechargeable cell of claim 12, wherein said cathode comprises a organic polymer.

23. (Currently Amended): The rechargeable cell of claim 12, wherein said cathode is ~~at least one~~ selected from the group consisting of polyviologen, polyacetylene, [[and]] polypyrrole, and combinations thereof.

24. (Original): The rechargeable cell of claim 12, wherein said cathode comprises a sulfur containing material.

25. (Original): The rechargeable cell of claim 12, wherein said cathode is at least one selected from the group consisting of  $\text{TiS}_2$ , S, polysulphide and polythiophene.

26-36. (Canceled)